

FIREPLACE ASSEMBLY WITH AROMATHERAPY SYSTEM

TECHNICAL FIELD

[0001] The present invention is directed to fireplace assemblies and, more particularly, to fireplace assemblies, including fireplaces, fireplace inserts, and stoves and components therefore.

SUMMARY

[0002] The present invention is directed to fireplace assemblies with integrated aromatherapy systems. A brief summary of some embodiments and aspects of the invention are presented. Thereafter, a detailed description of the illustrated embodiments is presented, which will permit one skilled in the relevant art to understand, make, and use aspects of the invention. One skilled in the art can obtain a full appreciation of aspects of the invention from the subsequent detailed description, read together with the figures, and from the claims, which follow the detailed description.

[0003] Under one aspect of the invention, a fireplace assembly is provided that has a receptacle for holding an aromatic fluid. The fireplace assembly includes an outer housing surrounding a firebox. The outer housing is spaced apart from portions of the firebox to define an airflow passageway around the firebox. The receptacle is coupled to the outer housing and is positioned generally adjacent to the firebox and partially within the airflow passageway. The receptacle is configured to receive an aromatic fluid, such as aromatherapy oil. As the firebox heats the air in the airflow passageway and the receptacle, the aromatic fluid evaporates and mixes with the heated air. The evaporated aromatic fluid and heated air are subsequently dispersed into the room where the fireplace assembly is located.

[0004] Under another aspect of the invention, a fireplace frame is provided that is attachable to a fireplace or fireplace insert. The fireplace frame includes support members connected to the outer housing of a fireplace or fireplace insert, and a receptacle is carried by the fireplace frame. The receptacle is configured to hold an aromatic fluid, such as aromatherapy oil. A fire in the fireplace or fireplace insert heats the receptacle, causing the aromatic fluid in the receptacle to evaporate. The evaporating aromatic fluid mixes with heated air that is dispersed into the room where the fireplace or fireplace insert is located.

BRIEF DESCRIPTION OF THE DRAWINGS

[0005] Figure 1 is an isometric view of a fireplace assembly in accordance with one embodiment of the invention.

[0006] Figure 2 is a partially-exploded front isometric view of the fireplace assembly of Figure 1 showing the receptacle spaced apart from the outer housing.

[0007] Figure 3 is a cross-sectional view taken substantially along line 3-3 of Figure 1 of one embodiment of the fireplace assembly of Figure 1.

[0008] Figure 4 is a front elevation view of a fireplace insert in accordance with an alternate embodiment of the invention.

[0009] Figure 5 is a cross-sectional view taken substantially along line 5-5 of Figure 4 of one embodiment of the fireplace insert of Figure 4.

DETAILED DESCRIPTION

[0010] Fireplace assemblies with integrated aromatherapy systems are described in detail herein in accordance with embodiments of the present invention. In the following description, numerous specific details are discussed to provide a thorough and enabling description for embodiments of the invention. One skilled in the relevant art, however, will recognize that the invention can be practiced without one or more of the specific details. In other instances, well-known structures or operations are not shown, or are not described in detail to avoid

obscuring aspects of the invention. In general, alternatives and alternate embodiments described herein are substantially similar to the previously described embodiments, and common elements are identified by the same reference numbers.

[0011] Figure 1 is an isometric view of a fireplace assembly 10 in accordance with one embodiment of the present invention. The illustrated fireplace assembly 10 is a free-standing, direct-vent stove having a decorative outer housing 14 that at least partially surrounds a firebox 12. In alternate embodiments, the fireplace assembly 10 can be a fireplace, fireplace insert, or other fireplace unit that generates heat. The outer housing 14 of the fireplace assembly 10 includes a front wall 22 with an air inlet 62 and an air outlet 64. The fireplace assembly 10 further includes a receptacle 70 carried by the front wall of the outer housing 14 and positioned above the firebox 12. The receptacle 70 provides an integral component that forms a decorative component on the front of the fireplace assembly 10. The receptacle 70 is configured to hold a selected aromatic material, such as a fluid, that evaporates when heated by the fireplace assembly 10. The evaporated aromatic material is then diffused throughout the room where the fireplace assembly 10 is located. Accordingly, the fireplace assembly 10 has an integrated aromatherapy system.

[0012] Figure 2 is a partially-exploded front isometric view of the fireplace assembly 10 of Figure 1 showing the receptacle 70 spaced apart from the outer housing 14. The receptacle 70 includes a front wall 72, a bottom wall 74, opposing side walls 76 and 77, and a back wall 78 that define a receiving area to contain an aromatic material 79. The top portion 81 of the receptacle 70 is open to allow the aromatic material 79 to be loaded into the receiving area. The receptacle 70 of the illustrated embodiment is slidably mounted in an aperture 83 formed in the outer housing's front wall 22 generally above the firebox 12. In alternate embodiments, the receptacle 70 may be positioned in various locations in the fireplace assembly 10 including, but not limited to, either side of the firebox

12, below the firebox 12, on either side of the outer housing 14, or on the top wall of the outer housing 14.

[0013] The receptacle 70 is moveable relative to the front wall 22 of the fireplace assembly 10 to slide or otherwise move between an open position and a closed position. When the receptacle 70 is in the open position, the receptacle projects from the aperture 83 in the front wall 22 to provide access to the receptacle's receiving area through the open top portion 81. In one embodiment, the receptacle 70 is a drawer that is slidably received by the aperture 83 of the fireplace assembly 10. In other embodiments, the receptacle 70 can be hinged such that it pivotably opens and closes.

[0014] Selected aromatic material 79 can be added to the receptacle 70 when in the open position. The receptacle 70 is then moved to the closed position so that the front wall 72 of the receptacle 70 is immediately adjacent to or flush against the front wall 22 of the fireplace assembly 10. The remaining portions of the receptacle 70 extend into the aperture 83, behind the front wall 22, and adjacent to the firebox 12. The front wall 72 of the receptacle 72 can include a handle or the like to facilitate opening and closing of the receptacle 70. The receptacle 70 may be refilled at any time with more or different aromatic material 79.

[0015] Figure 3 is a cross-sectional view taken substantially along line 3-3 of Figure 1. As best seen in Figure 3, the outer housing 14 includes a bottom wall 26, a back wall 28, and a top wall 34. The fireplace assembly 10 in the illustrated embodiment is a gas-burning unit having a burner assembly 200 contained in the firebox 12, such as the Ember Fyre® burner assembly manufactured by Travis Industries, Inc. of Kirkland, Washington. In alternate embodiments, the fireplace assembly 10 can be a wood-fueled, pellet-fueled, or electric fireplace, fireplace insert, or free-standing stove.

[0016] The firebox 12 in the illustrated embodiment includes a bottom wall 36, a back wall 38, opposing side walls 40, and a top wall 44. The firebox 12 is spaced apart from the walls of the outer housing 14 to define a heat exchanger 50 between the firebox and the outer housing. The heat exchanger 50 can include

an airflow passageway with bottom plenum 52 disposed between the outer housing bottom wall 26 and the firebox bottom wall 36, a back plenum 54 disposed between the outer housing back wall 28 and the firebox back wall 38, and a top plenum 56 disposed between the outer housing top wall 34 and the firebox top wall 44.

[0017] The heat exchanger 50 is in fluid communication with the air inlet 62 and the air outlet 64 in the front wall 22 of the outer housing 14. The heat exchanger 50 is adapted to direct an airflow 66 from the air inlet 62, around the firebox 12, past the receptacle 70, and out the air outlet 64. Heat from the firebox 12 heats airflow 66 as it passes through the passageways of the heat exchanger 50 before the heated airflow 66 is exhausted through air outlet 64. In some embodiments, the fireplace assembly 10 can include a blower that facilitates the flow of air through the fireplace assembly 10.

[0018] As the heated airflow 66 passes through the top plenum 56 of the heat exchanger 50, the heated air and the radiant heat from the firebox 12 heats the receptacle 70 and its contents. The heated aromatic material 79 in the receptacle 70 evaporates and mixes with the airflow 66 before the airflow exits the heat exchanger 50 through the air outlet 64 and into the room where the fireplace assembly 10 is located. In this way, the evaporated aromatic material 79 is diffused throughout the room when the fireplace assembly 10 is in operation to provide aromatherapy to the occupants in the room. In one embodiment, the top portion of the receptacle 70 is open, as described above with respect to Figure 2. The open portion of the receptacle 70 allows the evaporated aromatic material 79 to mix with the heated airflow 66. In alternate embodiments, a screen or panel with airflow slots can be provided over the top portion of the receptacle 70. The screen or panel covering the top portion of the receptacle 70 is configured to allow the evaporated aromatic material 79 to leave the receptacle and mix with the heated airflow 66.

[0019] An alternative embodiment of the present invention is shown in Figure 4, wherein the fireplace assembly 10 is a fireplace insert 100. The illustrated

fireplace insert 100 includes a decorative outer housing 114 that at least partially surrounds a firebox 112. The outer housing 114 includes a front wall 122. The front wall further includes an air inlet 162 and an air outlet 164. In the embodiment illustrated in Figure 4, the front wall 122 of the outer housing 114 is positioned flush against the hearth. In other embodiments, the front wall 122 of the outer housing 114 can protrude outward from the hearth. The fireplace insert 100 is sized to fit within the fireplace cavity in the hearth. Fireplace inserts of various sizes of may be utilized in different embodiments.

[0020] The fireplace insert 100 further includes a receptacle 170 carried by the outer housing 114 and positioned above the firebox 112. In one embodiment, the receptacle 170 is positioned above the firebox 112. In alternative embodiments, the receptacle 170 may be positioned at various locations in the fireplace insert 100. When the receptacle 170 is in the closed position, the front face 172 of the receptacle 170 is flush with the front face 122 of the fireplace insert 100. The receptacle 170 in the fireplace insert 100 is substantially similar to the receptacle 70 in the embodiments described above with respect to Figures 1, 2, and 3.

[0021] Figure 5 is a cross-sectional view taken substantially along line 5-5 of the fireplace insert 100 of Figure 4. As best seen in Figure 5, the outer housing 114 of the fireplace insert 110 includes a bottom wall 126, a back wall 128, and a top wall 134. In the illustrated embodiment, the fireplace insert 100 is a gas-burning unit that includes a burner assembly 200. The burner assembly 200 is substantially similar to the burner assembly described above with respect to Figure 3. In other embodiments, the fireplace insert 100 can be configured as a wood-fueled, pellet-fueled, or electric fireplace insert.

[0022] The firebox 112 in the illustrated embodiment further includes a bottom wall 136, a back wall 138, opposing side walls 140 and 141 (not shown in Figure 5), and a top wall 144. The firebox 112 is spaced apart from the walls of the outer housing 114 to define a heat exchanger 150 between the firebox and the outer housing. The heat exchanger 150 can include an airflow passageway with bottom plenum 152 disposed between the outer housing bottom wall 126 and the firebox

bottom wall 136, a back plenum 154 disposed between the outer housing back wall 128 and the firebox back wall 138, and a top plenum 156 disposed between the outer housing top wall 134 and the firebox top wall 144. The operation of the heat exchanger 150 can be substantially similar to the heat exchanger 50 described above with respect to Figure 3. The heated airflow 166 passing through the top plenum 156 of the heat exchanger 150 helps diffuse the evaporated aromatic material 179 from the receptacle 170 through the air outlet 164 and into the room where the fireplace insert 100 is located.

[0023] The above description of illustrated embodiments of the invention is not intended to be exhaustive or to limit the invention to the precise form disclosed. While specific embodiments of, and examples for, the invention are described herein for illustrative purposes, various equivalent modifications are possible within the scope of the invention, as those skilled in the relevant art will recognize. The teachings of the invention provided herein can be applied to other direct vent fireplace installations, not necessarily the particular installations described above.

[0024] While certain aspects of the invention are presented below in certain claim forms, the inventor contemplates the various aspects of the invention in any number of claim forms. In general, in the following claims, the terms used should not be construed to limit the invention to the specific embodiments disclosed in the specification and claims, but should be construed to include all components and methods of manufacturing the components in accordance with the claims. Accordingly, the invention is not limited by the disclosure, but instead the scope of the invention is to be determined entirely by the claims.

[0025] From the foregoing, it will be appreciated that specific embodiments of the invention have been described herein for purposes of illustration, but that various modifications may be made without deviating from the spirit and scope of the invention. Accordingly, the invention is not limited except as by the appended claims.